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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/649,767	08/28/2003	Masaki Takai	241959US0	5868

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OBLON, SPIVAK, MCCLELLAND MAIER & NEUSTADT, P.C.
1940 DUKE STREET
ALEXANDRIA, VA 22314

EXAMINER

KEYS, ROSALYND ANN

ART UNIT	PAPER NUMBER
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1621

NOTIFICATION DATE	DELIVERY MODE
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11/06/2007

ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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Office Action Summary

Application No.

10/649,767

Applicant(s)

TAKAI ET AL.

Examiner

ROSALYND KEYS

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 21 September 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 7-16, 18-26 and 30-34 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 7-16, 18-26 and 30-34 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

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DETAILED ACTION

Status of Claims

1. Claims 7-16, 18-26, and 30-34 are pending.

Claims 1-6, 17, and 27-29 are cancelled.

Claims 7-16, 18-26, and 30-34 are rejected.

Continued Examination Under 37 CFR 1.114

2. A request for continued examination under 37 CFR 1.114 was filed in this application after appeal to the Board of Patent Appeals and Interferences, but prior to a decision on the appeal. Since this application is eligible for continued examination under 37 CFR 1.114 and the fee set forth in 37 CFR 1.17(e) has been timely paid, the appeal has been withdrawn pursuant to 37 CFR 1.114 and prosecution in this application has been reopened pursuant to 37 CFR 1.114. Applicant's submission filed on September 21, 2007 has been entered.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 7-9, 11, 14, 15, 18, 22-24, and 31-34 are rejected under 35 U.S.C. 102(b) as being anticipated by Trost et al. (US 4,051,157) in view of Eardley et al. (US 3,658,799).

Trost et al. teach alkylation of an allylic carbon-oxygen bond (alcohol, ether, or ester) with a nucleophile in the presence of a palladium catalyst (see entire disclosure, in particular column 1, lines 15-66 and the claims). The reaction can take place in the presence of a trialkyl

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phosphite such as trimethyl phosphite (see column 3, lines 34-49). The nucleophiles include carbon, nitrogen and oxygen nucleophiles (see column 4, line 50 to column 5, line 30). Examples of known oxygen nucleophiles is shown in column 6, line 66 to column 7, line 15 of Eardley et al.

One having ordinary skill in the art at the time the invention was made would reasonably have expected that the oxygen nucleophiles of Eardley et al. were within the meaning of the oxygen nucleophiles disclosed as useful by Trost et al., since the Eardley et al. reference was patented some 5 years prior to Trost et al.

5. Claims 7-9, 11, 12, 14-16, 18, 20-24 and 30-34 are rejected under 35 U.S.C. 102(b) as being anticipated by Kurtz et al. (US 3,755,451) alone or in view of Bryant et al. (US 3,534,088).

Kurtz et al. teach exchange reactions between allylic compounds and active hydrogen containing compounds (XH compounds) in the presence of a catalyst such as platinum, palladium, ruthenium and the like along with modifiers, which include trialkylphosphites (see entire disclosure, in particular column 4, line 13 to column 9, line 27). Kurtz et al. teach that the reaction is generally applicable to allylic compounds regardless of the nature of the allylic substituent (see column 2, lines 16 and 17). Examples of claimed first allyl compounds having the claimed formula (a) are taught in column 4, line 68 to column 5, line 40. Examples of the claimed oxygen nucleophilic agent are given in column 5, line 45 to column 6, line 54. Examples of the monodentate phosphite compound having the claimed formula (1) are taught in column 8, line 43 to column 9, line 27. Kurtz et al. teach that the catalyst of Bryant et al. is active for promoting their exchange reaction (see column 4, lines 47-51). Bryant et al. teach that an ammonium compound is useful as a source carboxylate ion in their catalyst and that the use said carboxylate ion is beneficial (see entire disclosure, in particular column 3, lined 39 to column 4, line 15).

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

8. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

9. Claims 7-16, 18-26 and 30-34 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kurtz et al. (US 3,755,451) alone or in view of Hefner, Jr. (US 4,613,703).

Kurtz et al. teach the invention as described above but fail to expressly teach that X is a halogen atom, a sulfonyl group or a sulfonate group. However, Kurtz et al. do teach that their reactions are generally applicable to allylic compounds regardless of the nature of the allylic substituent (see column 2, lines 16-17). Thus, one having ordinary skill in the art at the time the

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invention was made would have found it obvious to utilize any known allylic compound in the invention of Kurtz et al. including those wherein X is a halogen atom, a sulfonyl group or a sulfonate group as claimed.

Kurtz et al. teach the invention as described above but fail to expressly teach the use of a monodentate phosphite compound of formula (1), wherein at least one of R1, R2 and R3 is a carbon chain having a carbon-carbon double bond or triple bond, as disclosed in claim 19. However, Kurtz et al. do broadly teach that modifier can be a trihydrocarbylphosphites (see column 8, lines 43-58). One having ordinary skill in the art would have found it obvious to utilize any known trihydrocarbylphosphite, including those claimed absent a showing of unexpected results.

Kurtz et al. teach the invention as described above but fail to expressly teach the use of a phosphonium compound in the reaction.

Hefner, Jr. teaches allylation of a hydroxyaromatic compound with an allyl halide in the presence of a quaternary salt catalyst (see entire disclosure, in particular the summary of invention and claims 1-3).

One having ordinary skill in the art at the time the invention was made would have found it obvious to utilize an ammonium or phosphonium salt catalyst, as taught by Hefner, Jr., in the process of Kurtz et al., since Hefner, Jr. teaches that use of such catalyst, in a process wherein a hydroxyaromatic compound is reacted with allyl chloride, would allow one to obtain diallylated products in higher yields with higher conversions of the hydroxyaromatic reactants (see column 3, lines 15-33).

Response to Amendment

10. The declaration under 37 CFR 1.132 filed October 8, 2007 is insufficient to overcome the rejection of claims 7-16, 18-26 and 30-34 based upon Kurtz et al. (US 3,755,451) alone or in view of

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Bryant et al. (US 3,534,088) or Hefner, Jr. as set forth in the last Office action because: the showing is with regard to the use of the modifier having the claimed formula (1). However, the use of a modifier having the claimed formula (1) is anticipated under 35 USC 102(b) by Kurtz et al. and Trost et al. A declaration filed under 37 CFR 1.132 is not effective to overcome a rejection under 35 USC 102(b).

Response to Arguments

Rejection of claims 7-9, 11, 14, 15, 18, 22-24 and 30-32 under 35 U.S.C. 102(b) as being anticipated by Trost, U.S. Patent No. 4,051,157

11. Applicant's arguments filed September 21, 2007 have been fully considered but they are not persuasive.

The Applicants argue that Trost does not exemplify the invention, nor does it teach the invention with sufficient specificity to amount to anticipation. To anticipate an invention, the prior art must disclose the invention with sufficient specificity or permit one to immediately envisage it, see MPEP 2131.02(A).

This argument is not persuasive because a claim is anticipated if each and every element as set forth in the claim is found, either expressly or inherently described. There is no requirement that the invention be exemplified. In the instant case Trost et al. teach each and every element as set forth in the claimed invention (see paragraph 4 above). Further, see column 2, lines 37-44 for an example of the claimed allyl compound having formula (a); see column 4, lines 27-30 of Trost et al. and column 6, lines 65 to column 7, line 15 of Eardley et al. for the claimed oxygen nucleophile; see column 1, lines 15-19 for the claimed palladium catalyst; and see column 3, lines 43-46 for the claimed monodentate phosphite compound having the formula (1).

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The Applicants argue that Trost does not disclose oxygen nucleophiles having the specific structure required by the claims.

This argument is not persuasive because Trost et al. teach that any oxygen nucleophile may be used. The Eardley et al. reference is supplied to show that one having ordinary skill in the art would have known that compounds such as alcohols and carboxylic acids would have been included in the meaning of oxygen nucleophiles as disclosed by Trost et al.*

*A 35 U.S.C. 102 rejection over multiple references has been held to be proper when the extra references are cited to:

- (A) Prove the primary reference contains an "enabled disclosure; "
- (B) **Explain the meaning of a term used in the primary reference;** or
- (C) Show that a characteristic not disclosed in the reference is inherent.

See MPEP 2131.01

Rejection of claims 7-16, 18-26 and 30-32 under 35 U.S.C. 103(a) as being unpatentable over Kurtz et al., U.S. Patent No. 3,755,451, in view of Bryant et al., U.S. Patent No. 3,534,088 or Hefner, Jr., U.S. Patent No. 4,613,703

12. Applicant's arguments filed September 21, 2007 have been fully considered but they are not persuasive.

The Applicants arguments regarding unexpected results are not sufficient to overcome this rejection for the reasons given in paragraph 10 above.

13. Any inquiry concerning this communication or earlier communications from the examiner should be directed to ROSALYND KEYS whose telephone number is 571-272-0639. The examiner can normally be reached on M, R & F 5:30-7:30 am & 1-5 pm; T & W 5:30 am-4 pm.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Yvonne Eyler can be reached on 571-272-0871. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/ROSALYND KEYS/
Primary Examiner
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October 27, 2007